SCH4U: Chemical Systems & Equilibrium – Unit Plan

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Intro: Chemical Systems in Equilibrium  Minds-On Activity | 7.1 Dynamic Equilibrium in Chemical Systems | 7.1 Lab: Discovering the extent of a chemical reaction | 7.2 Equilibrium Law in Chemical Reactions | 7.3 Qualitative Changes in Equilibrium Systems |
| 7.3 Qualitative Changes in Equilibrium Systems | 7.3 Lab: Testing Le Chatelier’s Principal | 7.5 Quantitative changes in equilibrium systems  Quiz Review | Quiz #1 | 7.6 the solubility product constant |
| 7.6 the solubility product constant | 7.6 Lab: Determining the Ksp | 7.7 energy and equilibrium : the laws of thermodynamics | 8.1 The nature of acid-base equilibria | 8.2 weak acids and bases |
| 8.2 weak acids and bases | 8.1 Lab: Determining the pH of common substance | 8.3 acid-base properties of salt solutions  Quiz Review | Quiz#2 | In-class case study assignment (STSE) – see GRASP |
| In-class case study assignment (STSE) – see GRASP | 8.4 acid-base titration | 8.5 buffers | Test Review | Unit Test |

CH 7: Chemical Systems in Equilibrium

7.1 Dynamic Equilibrium in Chemical Systems (16)

L: Discovering the extent of a chemical reaction

7.2 Equilibrium Law in Chemical Reactions (11)

L: Developing an equilibrium law expression

7.3 Qualitative Changes in Equilibrium Systems (11)

L:Testing Le Chatelier’s Principal

7.4 Case study: Producing Ammonia for food and bombs

7.5 Quantitative changes in equilibrium systems (19)

7.6 the solubility product constant (12)

L:Determinging the Ksp of calcium oxalate

L: Determining the Ksp for calcium hydroxide

7.7 energy and equilibrium : the laws of thermodynamics

STSE: Explore an issue: can we do anything about pollution?

CH 8: Acid-Base Equilibrium

8.1 The nature of acid-base equilibria

L: Determining the pH of common substance

8.2 weak acids and bases

8.3 acid-base properties of salt solutions

L: The pH of salt Solutions

8.4 acid-base titration

8.5 buffers

Case study: the science of acid deposition